

REMARKS

The Examiner's Action mailed on October 6, 2004 has been received and its contents carefully considered.

In this Amendment, Applicant is amending all of the pending claims, 1-3 and 7-9. Claims 1 and 7 remain the independent claims in this application. For at least the following reasons, it is submitted that this application is now in condition for allowance.

In the Action, claims 1-3 and 7-9 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,681,013, which is based on the parent of the present application. Accordingly, the Applicant is submitting with this Amendment a terminal disclaimer complying with 37 CFR 3.73(b) to overcome the rejection. Entry of the disclaimer and withdrawal of the double patenting rejection are respectfully requested.

In the Action, claims 1 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsutsui et al. (JP404345338A), and claims 2-3 and 8-9 are rejected under 35 U.S.C. 103(a) as being obvious over Tsutsui et al. in view of Shirani et al. (U.S. Patent No. 5,617,418). The pending claims are amended herein to more clearly distinguish over the applied prior art references.

In the present invention, a LAN having a power feeding system comprises a line concentrator (that is, a HUB), and a plurality of terminals respectively connected with the line concentrator via corresponding cables, each cable including a power feed line.

The power feeding system in the HUB includes a terminal detecting section (see, for example, telephone terminal detecting section 1, in application Figure 1), common to all terminals, and power control switching sections, one for each of the corresponding power feed lines. The terminal detecting section further comprises a power feed section, a link detecting section, a current monitoring section and power control section.

The plurality of LAN terminals includes at least one terminal that requires power from the power feeding system, which is, for example, a telephone terminal, and at least one terminal not requiring power.

With respect the LAN terminals connected to the HUB, the control section causes the power control switching sections to connect the power feed section to each of

the corresponding power feed lines in sequence, and the current monitoring section then detects whether the respective terminal is one that requires power from the power feeding system, based on a preset current value range. If the detected current is within the range, the power feeding system further continues feeding power to the terminal, and if it is not, the power feeding system stops feeding power to the terminal.

The Tsutsui reference upon which the Examiner relies, discloses an overcurrent prevention device for use with an individual piece of LAN terminal equipment. There is no disclosure, or even suggestion, in Tsutsui of a plurality of terminals, at least one of which requires power and one of which does not require power, or of a HUB having a plurality of power feed control switching sections for sequentially connecting a common power feed section to a plurality of power feed lines connected to the terminals, as required by amended claims 1 and 7.

Moreover, the device in Tsutsui is only used for preventing overcurrent. There is no disclosure, or even suggestion, of a current monitoring section for detecting whether the value of current flowing in each of the power feed lines when that power feed line is connected to the power feed section is within a preset current value range that indicates that a terminal requiring power is connected to the cable which includes the corresponding power feed line, as claims 1 and 7 also require. In other words, the apparent purpose of the device in Tsutsui is to protect the LAN terminal or the power feed section, or both, from potential damage due to overcurrent, and not to determine whether the LAN terminal being monitored is a telephone or other type of terminal requiring current from the power feeding system in the HUB.

With respect to claims 2-3 and 8-9, the Examiner acknowledges Tsutsui that fails to teach a link detecting section for monitoring each of the signal lines to detect whether the linkage with respect to the LAN, of the terminal connected to the corresponding signal line, is established. To overcome this deficiency in the disclosure of Tsutsui, the Examiner points to Shirani as teaching a link detecting section for monitoring each of the signal lines to detect whether linkage with respect to the LAN, of the terminal connected to corresponding signal line, is established. The Examiner argues that it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Shirani in the teachings of Tsutsui in

order to allow a network to be configured in a mixed protocol or a mixed environment, with, for example, a single hub connected to a plurality of nodes which operate according to different protocols, with the configuration being achieved automatically, without the need for manually establishing a predetermined protocol beforehand for each node.

The applicant respectfully disagrees. Claims 2-3 and 8-9 require that the control section cause the corresponding power feed control switching section to continue feeding power to the corresponding power feed line when the link detecting section detects that the linkage with respect to the LAN of the terminal connected to the corresponding signal line, is established, while the value of the current flowing in the corresponding power feed line is detected to be within said preset current value range, and further that, the control section cause the corresponding power feed control switching section to continue to stop feeding power to the corresponding power feed line when the link detecting section detects that the linkage with respect to the LAN of the terminal connected to the corresponding signal line, is established, while the corresponding power feed line is disconnected from the power feed section by the corresponding power feed control switching section.

By contrast, Shirani is directed solely to the problem of protocol compatibility. As the Examiner observes in the Office Action, the purpose of link detection in Shirani is to allow a network to be configured for mixed protocols, with the configuration being achieved automatically, without the need for manually establishing a predetermined protocol beforehand for each node. Shirani fails to teach or suggest that the link detection function might be used in connection with the control of power fed to various LAN terminal devices.

The fact that the prior art could be modified so as to result in the combination defined by the claims does not make the modification obvious unless the prior art suggests the desirability of the modification. In re Deminski, 796 F.2d 436, 230 USPQ 313 (Fed.Cir. 1986). As is clear from the foregoing, there is nothing in the prior art considered as a whole to motivate the combination recited in claims 2-3 and 8-9. For at least the foregoing reasons, it is respectfully submitted that claims 1-3 and 7-9, as amended, distinguish over the applied Tsutsui and Shirani references, whether considered

individually or in combination. It is respectfully requested that the rejections set forth in the Office Action be reconsidered and withdrawn, so as to place the application in condition for allowance.

If the Examiner believes that a conference would be of value in expediting the prosecution of this application, the Examiner is hereby invited to telephone the undersigned counsel to arrange for such a conference.

Respectfully submitted,

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Date

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